



An Invasive Species Information Network for the Americas

I3N, the IABIN Invasives Information Network, is integrating information from 16 Western Hemisphere countries

A growing number of plants, animals, and pathogens are becoming invasive in natural areas, inland waters, oceans, croplands, and rangelands. These invasive species pose threats to human health, national economies, and ecosystems, ranking second only to habitat destruction as a cause of loss of biodiversity. Key to the detection and management of this threat is the exchange of information across national borders.

In the Americas, information from published and unpublished accounts and databases on invasive species is scattered in locations and formats that often are not easily accessible even to local users. Here, Internet-accessible information can provide crucial benefits. For example, with easy access to national knowledge bases throughout the region, park managers could obtain data on which species are potentially invasive in a particular ecosystem, and then use this information in their planning efforts.

Creating a Hemispheric Network

The Inter-American Biodiversity Information Network (IABIN) sponsored a pilot project to exchange information on invasive species in the

Americas. Eleven organizations—one each in Argentina, Brazil, Bahamas, Chile, Dominican Republic, Ecuador, El Salvador, Guatemala, Jamaica, Mexico, and Paraguay—participated in the IABIN Invasives Information Network (I3N) pilot project. These

The Conference of the Parties to the **Convention on Biological Diversity** has stated that it "... welcomes the 'I3N' (Inter-American Biodiversity Information Network [IABIN] Invasives Information Network) initiative on invasive alien species, and calls on the Global Environment Facility, Parties, Governments and relevant organizations to support and participate in these initiatives."

in-country information providers are implementing common standards to post their records on the Web, where they can be searched from a single entry-point. Funded by the U.S. State Department and managed by the U.S. Geological Survey, the successful pilot not only realized the expected benefits, but participating countries reported significant benefits that had not been anticipated. As a result of the pilot's success, organizations from Haiti, Bolivia, Peru, the United States, and Venezuela have joined or are planning to join.

Standardizing Information Across Countries: The I3N Cataloguer

Each organization locates, inventories, and documents local information on projects, data, and experts, and lists invasive species. To assist with

the inventories, the I3N Cataloguer was developed by the California Information Node, a regional node of the U.S. National Biological Information Infrastructure (NBII). The Cataloguer provides data-entry forms for the creation of records, and it outputs these records in a format useful to other users once they are posted on the Web. The XML tags added by the I3N Cataloguer are based on the Dublin Core Metadata Standard as adapted through consultations with invasive species experts. Information entered into the Cataloguer is stored in a database (Microsoft Access 2000™). The Cataloguer is available free of charge from http://www.iabin-us.org/projects/i3n/i3n_tools/download_cataloguer.html.

Other tools supporting the network include a listserv; a virtual community implemented through the NBII Portal my.nbii.gov; and an extensive bilingual Web site that contains a repository for data, instructions, and all pilot project documents.



Mosca verde (green fly, Chrysomya), a species that is invasive in Guatemala.

Photo credit: I3N-Guatemala



Australian pine (Casuarina equisetifolia) has invaded sandy habitats in Hawaii, Florida, Argentina, Brazil, and many Caribbean islands.

Making Records Web-Accessible

The records held in local databases can be output as XML-tagged text files that can then be posted to a Web server for others to access. The data

providers retain complete control over their databases and can add, change, and delete information at will. Providers decide how to display the information on their respective Web sites. The NBII will host I3N records from any provider at no cost to the provider.

A program to search, retrieve, and display information from all of the partners in the I3N project has been provided by the

NBII. This search engine performs a free-text search of html, XML, PDF, text, and the most common word processing and spreadsheet files (e.g., Word, WordPerfect, Excel, Lotus).

In the future, I3N will develop value-added products. Some potential products are GIS data layers for particular species, taxonomic identification keys, fact sheets on particular species, maps, refined search capabilities, and case studies of impacts and successful control.

For More Information

Visit the network's home page at http://www.iabin-us.org/projects/i3n/i3n_project.html.

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Distributed and Integrated Network

Local expertise in collecting, managing, and disseminating invasive species information is essential. Because data on invasive species in any one country represent the efforts of a heterogeneous group of players, a distributed network of in-country providers, rather than a centralized system, is the appropriate approach. In I3N, therefore, each country's invasive species information is controlled by the country but is documented and posted on the Web in a standard format.

This trilingual data input and output tool creates standardized records.